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REPLY TO: 3420 FI&DM Detection

July 9, 1979

SUBJECT: Fruittree Leafroller -- San Bernardino Mountains



TO: Forest Supervisor, San Bernardino N.F.

On June 12, 1979, an aerial sketch mapping survey was conducted in the San Bernardino Mountains to determine the current infestation boundary of the fruittree leafroller, Archips argyrospila. This survey was conducted by Lincoln M. Moore, FIDM entomologist, Jim Bridges, Forest Silviculturist, San Bernardino National Forest, Gary Earney, District Forester, San Gorgonio Ranger District, Patricia Clark, Biologist, Arrowhead Ranger District, and Max Meadows, Forest Advisor, California Department of Forestry. Enclosed is a map summarizing the results of that survey.

The infestation boundary plotted during the aerial sketch mapping survey does not differ greatly from our earlier Evaluation Report 3430 of June 6, 1979; however, the references to Heaps Peak on Page 3 of the June 6 memo should be changed to read Frog Point.

The area southwest of the San Gorgonio Wilderness Area was not included in the earlier survey nor the aerial sketch mapping survey. This area of infestation was reported by Gary Earney in a Forest Pest Detection Report on June 14, 1979, and has been added to the survey map.

On June 13, 1979, eight points within four sample areas were selected at random from the aerial sketch maps and ground checked to evaluate the level of defoliation and determine the stage of development. This sample area included two points within each of the following areas: 1) Valley of Enchantment, 2) Running Springs, 3) Miller Canyon, and 4) Frog Point. The level of defoliation ranged from "light" (less than 50% defoliation) within the Valley of Enchantment to "moderate" (50-80% defoliation) around Running Springs and "heavy" (greater than 80% defoliation) in Miller Canyon and around Frog Point.

Larvae were observed in all infested areas with the exception of Miller Canyon, where only the adults were present, indicating an early egg hatch. The larvae from this early egg hatch caused early spring defoliation, enabling the trees to start to re-leafing in late May or early June.

In all sample areas, the California oakworm, Phryganidia californica, and a tent caterpillar, Malacosoma spp., were associated with the fruittree leafroller. Feeding damage by the California oakworm and the tent caterpillar caused an estimated 15-20% defoliation. The remaining 80-85% defoliation was attributed to the fruittree leafroller. The fruittree leafroller and the tent caterpillar have a single generation per year; therefore, the larval feeding of these defoliators will soon be over for this year. The California oakworm, however, has two and possibly three generations per year in southern California; therefore, larval feeding of this defoliator continues throughout the summer. Although defoliation by the fruittree leafroller, the major pest species in this defoliator complex, will soon be over, there may be additional defoliation due to the California oakworm.

If you have additional questions regarding these pests, please contact Lincoln M. Moore or Bruce Roettgering at (415) 556-4320.

**RICHARD S. SMITH, JR.**

WILFRED L. FREEMAN, JR., Director  
Forest Insect and Disease Management

Enclosure

LMMoore:cr